



Difficult Problems Require Geophysical Solutions

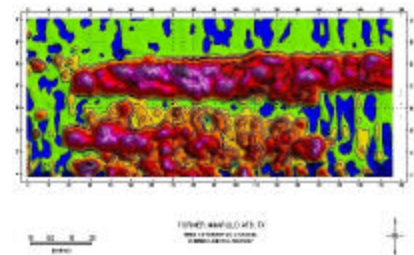
Army Corps of Engineers

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Hazardous and Toxic Waste Site Assessments and Hydrogeology Studies

- locate and delineate formerly used landfills
- locate buried waste containers
- investigate contaminant plumes in groundwater
- determine general site geology and hydrogeology
- monitor contaminant appearance at engineered barriers



Landfill delineation

Unexploded Ordnance

- multi-sensor data integration research for detection and discrimination
- Unexploded Ordnance (UXO) detection
- site characterization for UXO studies
- phenomenological modeling
- emerging technology research and development



Typical unexploded ordnance

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Geoarchaeological Investigations

- non-invasive methods
- applicable to cultural resource management
- geologic site characterization
- artifact detection and location
- spatial pattern recognition
- landscape analysis and interpretation



Historic Hawaiian Heiau

Subsurface Cavity and Tunnel Detection

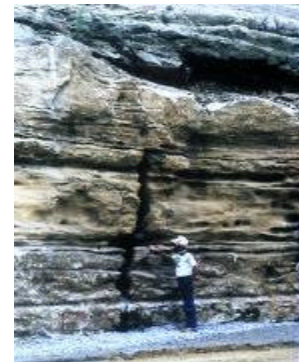
- anomalous seepage assessments for dams, levees, and other water retention structures
- detection and delineation of subsurface cavities
- karst site characterization
- tunnel detection



Buried wreckage located using geophysics

Geotechnical Site Investigations

- site geology and engineering significance
- determination of geotechnical properties
- groundwater detection
- seepage analysis of levees
- seismic and acoustic monitoring and predictions
- seismic safety analysis of dams and levees
- locate underground storage tanks (USTs) and utilities
- rebar detection in concrete
- waterborne geophysics



Patoka Dam Cavity



Folsom Dam and Reservoir



Waterways Explorer



Mormon Island Dam



Electromagnetic survey for underground storage tanks



Ground penetrating radar survey to evaluate concrete integrity

Geophysical Methods Capabilities

- seismic refraction
- electrical resistivity
- magnetic surveying
- self potential
- downhole geophysical logging
- electromagnetic induction
- microgravity
- ground penetrating radar
- vibratory experiments
- blast monitoring
- seismic crosshole/downhole
- subbottom seismic profiling (waterborne)
- side scan sonar (waterborne)



Electromagnetic survey for cultural artifacts



Microgravity survey for cavities and voids

Other Services Available

- In-house training seminars
- Review geophysical contractor proposals
- Coordinate and oversee geophysical contracts
- Prepare scopes of work



Electromagnetic survey for unexploded ordnance